cium chloride. He says that the desensitization of hay fever patients by means of specific pollen solutions will materially relieve a small percentage of them if treatment is begun early enough. Pollen solutions for therapeutic use should be prepared and used with great care and understanding. When improperly prepared or used there is danger of serious if not fatal reactions. Multiple sensitization is a frequent phenomenon in hay fever subjects, and its existence may account for many failures in the treatment by means of pollen solutions. The treatment of hay fever by means of calcium salts rests largely on empirical observations, but from the limited data at hand, if the doses are sufficiently large and prolonged through a more or less extended time, a large percentage of patients will receive material benefit. It is possible that vernal cases yield more readily than autumnal cases. The administration of calcium salts is without danger to the patient and may be undertaken by any intelligent physician. It requires neither a careful laboratory technic nor any special knowledge for its employment.

The Cause, Treatment, and Prevention of Hay Fever.—SHEPPEGRELL (*Med. Record,* 1916, xc, 95) says that the class of plants whose pollen may cause hay fever are practically all common weeds, and are very numerous and generally distributed. They all have abundant pollen and are wind-pollinated, that is, the process of fertilization is effected by the pollen being borne on the wind. These weeds are without attractive color or fragrance, and in the process of wind-pollination their pollen is very widely distributed. The author says that the elimination of pollen in the immediate vicinity of the patient is most important. Great relief to patients suffering from hay fever is observed when the hay fever weeds in close proximity are cut down, although, in order to be more completely effective, the efforts against hay fever weeds should be reinforced by proper legislation. Inasmuch as the common hay fever weeds are pests to the farmer, such legislation will serve a twofold purpose. The author discusses the treatment of hay fever by the injection of pollen extracts, calcium chloride, etc., and although adding nothing new, is a firm believer in the proper administration of pollen vaccines. Only the pollen should be used for vaccine, to which the patient reacts by the nasal, conjunctival, or skin reaction. The injection of a wrong vaccine may cause the patient to become sensitive to the pollen from which the extract is prepared. In some cases the effects of hay fever are due not only to the absorbed pollen protein but also to the action of microörganisms resulting in an inflammation of the nasal mucous membrane due to its lowered resistance. Finally, immunity to hay fever even in hay fever patients does not mean that the patient is not inhaling pollen but that the amount is not greater than can be neutralized. Hence, diminishing the source of pollen supply is a very important if not the most important part of proper therapy. Sheppegrell says that in New Orleans local legislation against the hay fever weeds has caused a marked reduction in the number of hay fever cases.

The Intracranial Injection of Salvarsanized Serum.—WARDNER (*Am. Jour. Insanity,* 1916, lxii, 643) reports a series of fourteen patients treated by the above method. Of this group of fourteen patients, five improved sufficiently to be able to go back to their work, and to date have remained well for from seven to eleven months. At the end of eleven months one of these patients had a relapse, which responded immediately to further treatment. Then other patients, with well-developed disease, have improved sufficiently to be able to do a certain amount of work about the hospital. Three others have shown fairly marked physical and mental improvement but cannot as yet be trusted at large. Two cases have died, one of which had previously shown a well-marked improvement. Two cases have shown no improvement. Both mental and physical improvement has generally been observed after the second or third operation, and has followed so closely on the treatment as to practically preclude the idea of coincidence. The maximum amount of improvement has occurred, as a rule, after six or seven treatments. Wardner believes that intracranial injections are without danger as shown by the fact that 102 have been performed without untoward results. The cases reported were not selected, and represent general paresis in a moderately advanced stage in most of the cases treated. The clinical diagnosis of general paresis was supported in every case by the laboratory findings. When pupillary changes existed no marked effect has been noted after the treatment. Reflexes, when previously exaggerated, show a tendency to become less so. Coördination and speech have been improved in all. The Wassermann reaction in the blood has been rendered negative in 6; reduced in intensity in 4; unchanged in 3, and not taken in 1. The Wassermann in the spinal fluid has been rendered negative in 2; reduced in 6; not retaken in 2; and unchanged in the rest. The cell count has been reduced to below 10 per c.mm. in 12; not retaken in 2. Wardner says that it is impossible to state what the final outcome of these cases will be, but believe that if cases of early general paresis, in which the actual destruction of brain tissue might reasonably be supposed to be slight, could be thoroughly treated, much might be done to control the future progress of this condition.

The Treatment of Paresis.—Evans and Thorne (*Am. Jour Insanity*, 1916, lxxii, 624) have treated 15 patients suffering from paresis with salvarsan and neosalvarsan; 14 of these patients were treated by the intraspinous method of Swift and Ellis and 1 by the intraspinous and intracranial methods combined. With the latter method two intracranial treatments were given at four weeks' interval, together with three intraspinuous injections. The largest number of intraspinous injections given to one individual was ten and the smallest number three. Three of these patients showed distinct mental and physical improvement; 5 showed physical improvement only; 2 died during the course of treatment; 2 died ten and thirteen months, respectively, after treatments were discontinued; the remainder showed no improvement whatever. Of the 3 who showed mental and physical improvement 1 was discharged and still remains in good physical and mental condition, having returned to work. One showed the first signs of improvement three months after receiving the last treatment. The third died with convulsions ten months after treatment. The number of treatments given to each patient was insufficient to reduce the